Testimony of
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before the
House Energy and Commerce Subcommittee on
Oversight and Investigations
on
A Review of Security Initiatives at
DOE Nuclear Weapons Facilities

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Thank you for asking me to testify today. The Project On Government Oversight (POGO) is an independent government watchdog group. We have been investigating and working to improve security at the Department of Energy's Nuclear Weapons Complex for over five years.

In May 2004, then-Secretary Abraham announced some bold initiatives for improving the security of the entire nuclear weapons complex. Last year we testified that former Secretary Abraham's initiatives were an important step toward addressing the key weaknesses in security in the nuclear weapons complex, and we were cautiously optimistic that they would be implemented. As it turns out, our caution was well placed. The major problem with the initiatives: The former Secretary failed to establish timely deadlines for their implementation and, as a result, many of these initiatives have now stalled. To get back on track, DOE Secretary Samuel Bodman has several issues he needs to address. First, he needs to set strict deadlines and, because officials throughout the nuclear weapons complex have strongly resisted any change, he needs to assign trusted staff to constantly follow up on the progress.

Adding to the current bureaucratic inertia is the belief by those inside the complex that they can just wait out any new directives until the current Secretary has moved on, and the status quo can be maintained. The revolving door between the Department of Energy and the privately-run weapons labs creates a lack of incentive to change. There is an insular environment in which people coming into the DOE, and particularly the National Nuclear Security Administration (NNSA), bring with them their biases in favor of the status quo: No one likes to criticize their own actions.

An array of concerns arises when it comes to securing America's nuclear material. But security experts' greatest fear is very distinct: a terrorist group successfully reaches its target at one of the facilities, and within an extraordinarily short time, uses the highly-enriched uranium (HEU) to create an improvised nuclear bomb on site (known as an Improvised Nuclear Device, or IND). It only takes a critical mass of HEU (about one hundred pounds) to create an IND. To put this in perspective, one site alone stores about 400 metric tons of HEU. According to Princeton University's Frank von Hippel, "a 100-pound mass of uranium dropped on a second 100-pound mass, from a height of about 6 feet, could produce a blast of 5 to10 kilotons."[1] The blast from the Hiroshima atomic bomb was about 12 kilotons, killing over 200,000 people.

Why should we care about this? According to the Department of Homeland Security, this is exactly what worries them – the detonation of a 10-kiloton nuclear bomb would destroy everything within half a mile and contaminate 3,000 square miles of land. The nuclear weapons complex creates these homeland security vulnerabilities right here at home.

By far, the most successful Abraham initiative was the re-examination of the Design Basis Threat (DBT), or security standards. Under the new DBT, security forces

[1] Wald, Matthew L. "*Suicidal Nuclear Threat Is Seen at Weapon's Plants,*" *New York Times*, January 22, 2002.

will be required to repel more than three times the number of attackers than they were required to protect against prior to 9/11. Furthermore, it will be assumed that adversaries will be using far more lethal weapons and much larger truck bombs than had previously been considered. Yet the new standards will not be fully implemented until 2008 – seven years after 9/11.

While there were very significant improvements to the Design Basis Threat, the follow-through on the other initiatives, for the most part, is tepid at best. For the sake of brevity, the rest of my testimony will only focus on what we consider the most urgent initiatives that need your immediate intervention.

Some key weapons facilities, including Los Alamos' TA-18 and Lawrence Livermore National Lab, will not be able to protect against the new threat level no matter how much money is spent. Removing all Special Nuclear Materials from those facilities eliminates security vulnerabilities at those facilities while dramatically decreasing security costs.

Los Alamos National Lab,s (LANL) TA-18

Widely recognized as the most vulnerable site in the nuclear weapons complex, TA-18 is scheduled to be de-inventoried of weapons-grade nuclear materials by the end of September 2005. It is worth noting that in 2000 then-Secretary Bill Richardson had ordered the facility to be de-inventoried by the end of 2004, but somehow Los Alamos was able to ignore him. Currently, LANL is pushing to continue activities at TA-18, further postponing the move at least six months. POGO has been told that despite promises from the Lab that they will meet the schedule – this can not happen as long as these activities continue to be performed there. In addition, much of the material will be stored at the Los Alamos' Technical Area 55 for an unknown period of time. Security costs are beginning to mount, as the delays continue.

POGO recommends that NNSA honor the former Secretary's initiative, and halt these experiments so that the material can be moved to the Device Assembly Facility at the Nevada Test Site on schedule.

Lawrence Livermore National Lab

Another of former Secretary Abraham's May 2004 initiatives was to review the necessity of maintaining Livermore's Special Nuclear Materials. This initiative has stalled completely. I think I know why. Just one month prior to Abraham's speech, NNSA Director Linton Brooks testified before the House Government Reform Committee that he opposed suggestions of de-inventorying Livermore, and in fact, the NNSA has proposed doubling Livermore's plutonium to 1,500 kilograms.

Roughly seven million people live within a 50 mile radius of the Livermore Lab. Many residential homes now exist across the street from the Lab's fence line, and new townhouses with mini-vineyards are being built along the edge of the fence line. These homes sit only 800 yards from the Superblock, which houses the Lab's plutonium.

Surprisingly, the protective forces at Livermore are issued less lethal weapons than protective forces at other sites that store Special Nuclear Material.

POGO recommends removing all weapons-grade plutonium and highly-enriched uranium from Livermore. If Livermore continues to need some amount of this material for its mission, the required material should be stored at the Device Assembly Facility in Nevada, only an hour's plane ride away. Livermore scientists who need to work with the material can travel there to conduct research, something they did for years during the nuclear testing program.

Highly-Enriched Uranium Materials Facility (HEUMF) at Y-12

Until four years ago, while Lockheed Martin still managed Y-12 near Oak Ridge, Tennessee, there were plans to build an underground or bermed storage facility. Virtually all modern storage facilities are underground, including the Device Assembly Facility (DAF) and KUMSEC at Kirtland Air Force Base. An underground facility would be much harder to penetrate and would serve as a greater deterrent to terrorists. U.S. Special Operations Command personnel have told POGO that an above-ground facility is a substantially more vulnerable design and that the underground option is the only credible one. Yet the current contractor, BWXT, changed the plan to build an underground or bermed facility to that of an above-ground facility.

The Department is currently breaking ground for the above-ground building known as the Highly-Enriched Uranium Materials Facility (HEUMF) to store the plant's hundreds of tons of HEU. The DOE Inspector General has criticized the design and cost of this new building, concluding that it will cost more and be less secure than the original plan for a bermed (partially underground) facility.

In 2004, Sandia National Lab was asked by NNSA to evaluate the HEUMF plans. It was ultimately Sandia's approval of this design that persuaded DOE Headquarters to give the green light for the above-ground building. POGO has learned, however, that the Sandia study never made a comparison of the HEUMF design to an underground or bermed design, explaining in the small print they did not want to have to consider an entire redesign for the building. Ironically, it was an earlier Sandia study that had recommended using existing designs from two other government-owned underground facilities to solve the Y-12 storage problem.

There are also plans to build a second building identical to the HEUMF to house the manufacturing of weapons parts from HEU. It is a poor security practice to create two targets, and inefficient at best to have two separate buildings between which the

materials must be transported regularly, creating further risk as well as dramatically increasing security costs.

DOE should immediate stop work on the above-ground HEUMF storage facility. NNSA should quickly move to construct an underground or bermed facility to store both the non-surplus HEU as well as the new modern manufacturing facility. This would result in only one double fence line, known as a Perimeter Intrusion Detection Assessment System (PIDAS), for both operations, as well as provide substantially better security against terrorist attack. A modified DAF design could accommodate both functions.

Downblend Additional Highly-Enriched Uranium

In his May 2004 speech, then-Secretary Abraham proposed the downblending of 100 additional metric tons (beyond the surplus 174 metric tons) of Y-12's surplus highly-enriched uranium. The disposal of excess HEU is essential so that these materials no longer create an unnecessary homeland security vulnerability. In addition, downblending the HEU will significantly help in reducing the enormous costs associated with protecting these materials.

However, according to DOE officials, the initial program review of HEU stockpiles across the complex initiated by former Secretary Abraham was stymied by complaints from the Office of Naval Reactors, a nearly-autonomous arm of the DOE, claiming they may need it some day for their reactors. The long-held territorialism by Naval Reactors dates back to its origins under Admiral Hyman Rickover, and presents a formidable bureaucratic hurdle to the downblending of HEU. Currently Y-12 alone stores over 400 metric tons of HEU.

DOE does not seem to have the stomach to live up to its promises. The United States has only downblended 34 of the 174 metric tons already declared excess. The remaining downblending it is not scheduled for completion until 2016 or beyond.

POGO recommends dramatically speeding up the current downblending schedule, and affirming former Secretary Abraham's initiative of increasing the amount of HEU declared excess by another 100 metric tons.

Review Complex for Consolidation Opportunities

Former Secretary Abraham also encouraged consolidating nuclear materials: "Ultimately, I believe we need to both reduce the number of sites with Special Nuclear Material to the absolute minimum, consistent with carrying out our missions, and to consolidate the material in each of those sites to better safeguard that material." He asked NNSA Director Brooks to head up a study of consolidation options. I understand that this study is just beginning to get underway – nine months after the initiative was assigned to NNSA. POGO decided not to wait for them. We are in the final stages of

preparing a report with recommendations of shrinking the number of facilities across the country that house Special Nuclear Materials from thirteen sites to seven, at a cost savings of nearly $3 billion over three years.

Conclusion

I would be remiss if I did not report to the Committee that, while not a part of former Secretary Abraham's initiatives, the treatment of whistleblowers throughout the complex remains abysmal. Retaliation remains the norm, not the exception, as can be seen in the case of Tommy Hook and Chuck Montano, who have both worked at Los Alamos for decades. After the Committee's three hearings on financial fraud at Los Alamos, the University of California was telling the public that all was resolved, while at the same time retaliating against these two men who knew otherwise. Hook and Montano were responsible for providing audit support for UC and uncovered ongoing irregularities and outright misconduct amounting to millions of taxpayer dollars. Their audit reports were withheld from DOE. Their treatment? Their work was taken away from them, they were given no work for nine months, and now they are only being handed menial assignments. Even the head of the Los Alamos Site Office tried to intervene on Tommy Hook's behalf, only to be rebuffed by an arrogant University of California. Under the current system, DOE contractors have NO incentive to treat whistleblowers well – as all their legal fees are reimbursed by the federal government.

The Department of Energy does not need new offices such as the NNSA's new Office of Performance Assurance, new commissions, or new studies. The DOE needs to follow through on its existing commitments. Safety and Security Performance Assurance Director Glenn Podonsky is keeping tabs on the progress of these initiatives, and is noting where there is no progress at all. His office's Site Assistance Visits are providing new insights into important consolidation opportunities. The Committee should remain apprised of this ongoing work. But even with the strongest leadership from the Secretary's office, the only way these initiatives will be enacted is with your continued vigilance. DOE's history has shown that without pressure from Congress and specifically from this subcommittee, these initiatives will likely fail.